FlyBy Math™ Alignment
Hawaii Content and Performance Standards III: Mathematics
Updated 9/28/05

Strand: Numbers and Operations

Standard 1. NUMBER SENSE:
Understand numbers, ways of representing numbers, relationships among numbers, and number systems

Topic and Benchmark	***FlyBy Math*™ Activities**
Numbers and Number Systems MA.8.1.3 Use ratios and proportions to represent the relationship between two quantities	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios. --Interpret the slope of a line in the context of a distance-rate-time problem.

Strand: Measurement

Standard 4: FLUENCY WITH MEASUREMENT
Understand attributes, units, and systems of units in measurement; and develop and use techniques, tools, and formulas for measuring

Topic and Benchmark	***FlyBy Math*™ Activities**
Measurement Tools and Techniques MA.8.4.2 Express rates of change as a ratio of two different measures, where units are included in the ratio, and use the derived rate to solve problems	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.
Measurement Tools and Techniques MA.8.4.3 Use ratios and proportions to solve measurement problems	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.

Strand: Patterns, Functions, and Algebra

Standard 9: PATTERNS AND FUNCTIONAL RELATIONSHIPS:
Understand various types of patterns and functional relationships

Topic and Benchmark	***FlyBy Math*™ Activities**
Functions MA.8.9.2 Use linear relationships with two variables to solve problems	--Represent distance, speed, and time relationships for constant speed cases using linear equations and a Cartesian coordinate system.

Standard 10: SYMBOLIC REPRESENTATION: Use symbolic forms to represent, model, and analyze mathematical situations	
Topic and Benchmark	***FlyBy Math™* Activities**
Numeric and Algebraic Representations MA.8.10.1 Translate among tables, graphs (including graphing technology when available), and equations involving linear relationships	--Represent distance, speed, and time relationships for constant speed cases using linear equations and a Cartesian coordinate system.
Numeric and Algebraic Representations MA.8.10.2 Solve linear equations and inequalities with two variables using algebraic methods, manipulatives, or models	--Represent distance, speed, and time relationships for constant speed cases using linear equations and a Cartesian coordinate system.
Numeric and Algebraic Representations MA.8.10.3 Use tables and graphs to represent and compare linear relationships	--Represent distance, speed, and time relationships for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system. --Use graphs to compare airspace scenarios for both the same and different starting conditions and the same and different constant (fixed) rates.
Rates of Change MA.8.10.4 Use the slope of a line to describe a constant rate of change	--Interpret the slope of a line in the context of a distance-rate-time problem.